

US010198949B2

(12) United States Patent Becker

(10) Patent No.: US 10,198,949 B2

(45) **Date of Patent:** Feb. 5, 2019

(54) METHOD AND SYSTEM FOR PARKING VERIFICATION VIA BLOCKCHAIN

- (71) Applicant: Mastercard International
 - Incorporated, Purchase, NY (US)
- (72) Inventor: William Becker, Stamford, CT (US)
- (73) Assignee: MASTERCARD INTERNATIONAL INCORPORATED, Purchase, NY (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35
 - U.S.C. 154(b) by 0 days.
- (21) Appl. No.: 15/581,006
- (22) Filed: Apr. 28, 2017
- (65) Prior Publication Data

US 2018/0315309 A1 Nov. 1, 2018

- (51) Int. Cl. *G08G 1/133* (2006.01) *H04L 9/06* (2006.01)
- (52) U.S. Cl. CPC *G08G 1/133* (2013.01); *H04L 9/0637*
- (2013.01); *H04L 9/0643* (2013.01) (58) **Field of Classification Search** None

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

5,712,789	A *	1/1998	Radican	G06Q 10/08
				700/226
6,340,935	B1 *	1/2002	Hall	G07B 15/04
				340/905

8,665,118 B1*	3/2014	Woodard G08G 1/144
8 854 205 B2*	10/2014	340/425.5 Daniel G06Q 10/08
* *		340/2.1
9,222,795 B1*	12/2015	Gerlach G01C 21/3667
9,613,532 B2*	4/2017	Smullin G08G 1/142
9,754,487 B1*	9/2017	Woodard G08G 1/143
2005/0057373 A1*	3/2005	Noguchi G08G 1/14
		340/932.2
2007/0040701 A1*	2/2007	Browne G08G 1/14
		340/932.2

(Continued)

OTHER PUBLICATIONS

U.S. Appl. No. 15/386,552, by Prashanna S. Tiwaree, filed Dec. 21, 2016.

(Continued)

Primary Examiner — Curtis King (74) Attorney, Agent, or Firm — Buchanan Ingersoll & Rooney PC

(57) ABSTRACT

A method for distributing parking availability data via blockchain includes: storing a blockchain comprised of a plurality of blocks, each block having a block header including a timestamp; receiving spot availability notifications including a common spot identifier and availability data; generating a transaction value including the common spot identifier and availability data; generating a new block header including i) a current timestamp, ii) a reference hash value generated via hashing of the block header included in a most recent block identified via the timestamp, and iii) a transaction hash value generated via hashing of the new transaction value; generating a new block comprised of the new block header and the new transaction value; and transmitting the generated new block.

16 Claims, 8 Drawing Sheets

